## **Drones in Forestry Planning**



Metsä Group photographed in 2018 with drone about 3 500 hectares of forest in southern and western Finland and utilized the data as basis for forest plans for forest owners. According to experience, the method has been developed and now the drone forest plans are being sold as an alternative to traditional forest plans. The forest plan based on information described by Drone or copter with camera challenges the traditional forest planning. The method is used in particular to get more accurate tree information.

The drone plan will be of interest to the forest owners who want to be in the front and develop new developments with forest industry. For example, in a virtual forest, the data measured in the drone will create a precise tree map, where the trees are in the right places and the tree species are correct. In virtual reality, it will better reflect the fluctuations of the wood inside the forest compartment than the traditional forest plan information. The drone design and virtual forests form an interesting pair in the future by producing new experiences for forest owners.

The measurements will provide both the amount of trees in cubic meters and the value of the wood in euros more accurately than before. With drone surveys we also get information about the amount of dead wood – it helps to preserve the important structure of forest for diversity.

The method is capable of identifying tree three species: pine, spruce and birch. The remaining deciduous tree species are logged into the category of other deciduous trees. Based on the measurement data, treatment recommendations are calculated. This drone-made plan differs from the traditional, where human being makes the treatment recommendations.

The forest plan produced by drone is particularly suitable for updating the forest plan that is about to expire. It is also suitable for forest owners, who are particularly interested in the amount and value of the timber.

The forest plan of the drone also benefits from a faster delivery of traditional forest plan. Delivery time is few months, which is only half of the delivery times of traditional forest plan.

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**DETALJER** OPPRINNELSE FOR TRE **MOBILISERINGSPOTENSIAL** Skog Medium TYPE TRE Tre fra rundtvirke BæREKRAFTPOTENSIAL - VERDI TYPE TRE INVOLVERT **ENKEL IMPLEMENTERING** Stemwood, energy wood Easy, requires IT skills PåVIRKNING På MILJØ OG BIOLOGISK MANGFOLD **ENKEL IMPLEMENTERING - EVALUERING** Positive VIKTIGE FORUTSETNINGER **INNTEKTSEFFEKT** IT skills needed, co-operation needed between IT companies and forest Positive companies UTNYTTELSESPOTENSIAL TYPE BEGIVENHET DER DENNE BPI HAR BLITT OMTALT

HUB EFFEKT På ARBEIDSPLASSER

Northern Hub Positive

ØKONOMISK PåVIRKNING KOSTNADER MED IMPLEMENTERING (EURO - €)

Positive --

SPESIFIKKE KUNNSKAPSBEHOV

IT skills, knowledge of forest planning processes

MER INFORMASJON

**UTFORDRING ADRESSERT** 

5. Forbedre den økonomiske og miljømessige

ytelsen i skogbrukets forsynings kjede

**NøKKELORD** 

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**OPPRINELSESLAND** 

Finland

DOMENE

Skogforvaltning, skogskjøtsel, økosystemtjenester

**TYPE LØSNING** 

Rådgivnings- og serviceverktøy for skogeiere

DIGITAL LØSNING INNOVASJON

Nei Ja

POTENSIALE START OG SLUTT åR

Nasjonal 2017 -

KONTAKT INFORMASJON

**EIER ELLER FORFATTER** 

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RAPPORTØR

REFERENCES
AND RESOURCES

HJEMMESIDE (HOVEDSIDE)

**RESSURSER** 

https://www.metsaforest.com/fi/Yritys/Tiedotteet/Pages/Tiedote.aspx

PROSJEKTETS HJEMMESIDE

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REFERANSE TIL PROSJEKT

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## PROSJEKT SOM DETTE FAKTAARKET ER OPPRETTET UNDER

Rosewood

**INNLEGGSDATO** 

17 sep 2019







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## A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY





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